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(54) **EXPANDABLE UNDERREAMER/
STABILIZER**

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(57) **ABSTRACT**

A downhole tool that functions as an underreamer, or alternatively, as a stabilizer in an underreamed borehole. The tool includes one or more moveable arms disposed within a body having a flowbore therethrough in fluid communication with the wellbore annulus. The tool alternates between collapsed and expanded positions in response to differential fluid pressure between the flowbore and the wellbore annulus. In one embodiment, the tool moves automatically in response to differential pressure. In a second embodiment, the tool must be selectively actuated before it is moveable. When the tool expands, the arms are preferably translated axially upwardly, while simultaneously being extended radially outwardly from the body. The expanded tool diameter is adjustable at the surface without changing components. The arms may include borehole engaging pads that comprise cutting structures or wear structures or both, depending upon the function of the tool.

73 Claims, 8 Drawing Sheets

